



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,534	07/11/2003	Paul N. Becker	MP1713-US2	5036

7590 10/29/2004

Tyco Electronics Corporation
Intellectual Property Law Dept.
MS R20/2B
307 Constitution Drive
Menlo Park, CA 94025-1164

EXAMINER


EASTHOM, KARL D

ART UNIT	PAPER NUMBER
----------	--------------

2832

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/618,534	Applicant(s) BECKER ET AL.	
	Examiner Karl D Easthom	Art Unit 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 14-23 is/are pending in the application.
 4a) Of the above claim(s) 14-16 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-9 and 23 is/are allowed.
- 6) ☒ Claim(s) 10 and 17-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2832

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 17-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Chandler et al.

(US 5,874,885. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10 and 17-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Chandler et al. For claim 17, the surface layer protrusions for a base layer of a foil is disclosed as relatively smooth or microrough, col. 5, lines 35-40. Since a microrough base layer is described as at least 0.3 microns, this implies a smooth base layer is less than that, meeting the claim. The RD at least 0.6 at col. 6, lines 45-50. the surface layer at col. 6, lines 10-15 and base layer at col. 5, lines 20-25 comprise the same metals. For claim 18, there is no evidence that pulse plating produces a different product than by electrodeposition, see col. 5, lines 30-35. Applicant bears the burden of proving by evidence that a pulse plating process step results in a distinct product, where here, the claimed RD and protrusions are met. For claim 19, see claim 2 of Candler. For claim 20, the irregularities of smaller nodules, in the form of a “bunch of grapes” is dendritic, see col. 5, lines 45-50. The RD is noted to be at least 0.8, so that RD of 1.5 to 1.7 is met, since same is in the range of at least 1.5

Art Unit: 2832

to 1.7. For claim 22, see claims 3-5 of Chandler. For claim 21, the foils are produced by depositing by electrodeposition as noted at col. 5, and diffusion is "limited" to the extent that the process is finite in time. For claim 10, Chandler discloses the invention essentially as noted above, except there is no explicit disclosure that the Ra of the base is less than .45um. Chandler discloses that the Ra for the base should be "especially less than 0.7" at col. 5, lines 50-60 in order to form a generally smooth layer for a later surface or intermediate layer, so that .45um is implied as within the range since it is less than "especially less than 0.7". As the 103 alternative for claims 10 and 17, where Chandler discloses a desire for the base to be smooth as noted, and discloses Ra as especially less than 0.7, and implies protrusions of less than 0.3 microns for smooth layers, and of course, as known, perfection is zero, it would have been obvious to render the surface as smooth as possible.

4. Claims 1-10 and 23 allowed for reasons alluded to next.

5. Applicant's arguments filed 9/17/4 have been fully considered but they are persuasive only as to claims 1-9 and 23. That is, for those claims, Applicant argues that Chandler employs a profilometer for his measurements. The evidence in the file, as applicant argues, is that the Chandler devices, when measured by an interferometer as claimed, would have at least twice the Chandler indicated Ra (at least 1.3 at col. 6). Thus, the Chandler devices, using applicant's method of measurement, have about a 2.7 Ra at a minimum (see also page 8 of the arguments). With Rd of at least 0.6, the RaRd product exceeds 1.6 as claimed. Further, there is no suggestion to make the RaRd product smaller in Chandler, since the teaching is to have rougher surfaces for better electrode attachment to a polymer. As to claim 17, applicant states that Chandler teaches that the base and metal layers are different. This is not correct as noted above

where the surface and base layers may be the same, and an intermediate layer is optional. For claim 20, see the remarks above, where there is no higher limit of the range taught by Chandler.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is (272) 571-1989. The examiner can normally be reached on M-Th, 5:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on (272) 571-1989. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Karl D Easthom
Primary Examiner
Art Unit 2832

KDE